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Conference Abstract

Facing e-Biodiversity Challenges Together: GBIO framework-based synergies between DiSSCo and LifeWatch ERIC

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Abstract

The collaboration between LifeWatch ERIC and DiSSCo (Distributed System of Scientific Collections), both pan-European research infrastructures focusing on biodiversity, can be achieved in a number of ways. The direct initiation of this collaboration can be carried out through their joint support to GBIF (Global Biodiversity Information Facility). This approach will facilitate meeting GBIF's overall objective stated as: "Connecting data and expertise: a new alliance for biodiversity knowledge" (Hobern and Miller 2019).

LifeWatch ERIC supports GBIF in a collaborative way by integrating and providing e-Services according to Global Biodiversity Informatics Outlook (GBIO) Framework objectives (Fig. 1), particularly suitable for the Understanding focus area. This concentrates on building modeled representations of biodiversity patterns and properties, based on any possible evidence, using the following components:

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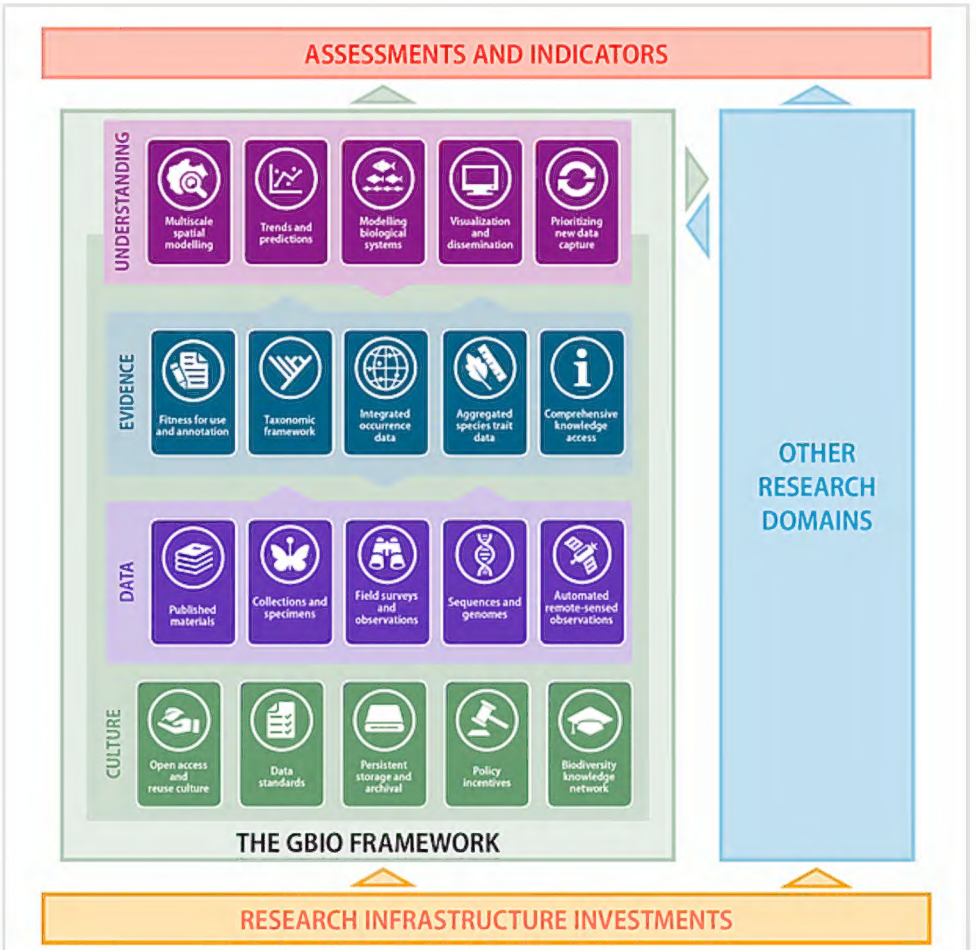

Figure 1.

GBIO Framework (Hobern et al. 2012) identifying 20 components as essential elements of biodiversity informatics and organized as four layers of focus: Culture, Data, Evidence and Understanding.

1. Multiscale species modelling;
2. Trends and predictions;
3. Modelling biological systems;
4. Visualization and dissemination;
5. Prioritizing new data capture.

In this regard, and during the 2nd Global Biodiversity Information Conference, LifeWatch ERIC actively participated in one of the four parallel working groups reviewing different components from the GBIO framework. Each component was selected to capture information on a broad range of different challenges and opportunities. At the same event, DiSSCo mainly focused on the Data layer, as the main provider of data and other types of collections resources in Europe.

The Evidence layer is the fertile interface to develop sound synergies for collaboration by both research infrastructures in order to support GBIF through the development of 3 concrete activities:

- Participation in the co-design, development and deployment of a multi-purpose Virtual Research Environment (VRE) to support DiSSCo, specifically by integrating the collections e-Services and by engaging the various communities of practice;

- Participation in the co-design and co-implementation of relevant e-Services in LifeBlock (LifeWatch ERIC blockchain-based technology platform);
- The active participation of DiSSCo for integrating collections data: DiSSCo is one of the main resources needed for the integration of GLOBIS-B **GLOB**al **I**nfrastructures for **S**upporting **B**iodiversity work on Essential Biodiversity Variables (EBVs) (Kissling et al. 2018). Thus, EBVs together with species traits will be integrated into LifeBlock platform in order to feed Ecosystem Services needed to further support Biodiversity Ecosystem Services VRE provided by LifeWatch ERIC distributed e-Infrastructure.

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